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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/818,616
Filing Date	March 28, 2001
Inventor(s)	Katherine G. AUGUST et al.
Group Art Unit	3627
Examiner Name	Richard E. Chilcot, Jr.
Attorney Docket Number	29250-000903/US

ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request (contained in Notice of Appeal) <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Letter to the Official Draftsperson and ____ Sheets of Formal Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) ____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims) <input checked="" type="checkbox"/> Appeal Communication to Group (Notice of Appeal, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name John E. Curtin	Reg. No. 37,602
Signature			
Date	February 28, 2005		

FEE TRANSMITTAL for FY 2005

Effective 10/01/2004. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500

Complete if Known

Application Number 09/818,616
Filing Date March 28, 2001
First Named Inventor Katherine G. AUGUST
Examiner Name Richard E. Chilcot, Jr.
Art Unit 3627
Attorney Docket No. 29250-000903/US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit
Account
Number

08-0750

Deposit
Account
Name

Harness, Dickey & Pierce, PLC

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments
☐ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1011	300	2011	150	Utility filing fee	
1012	200	2012	100	Design filing fee	
1013	200	2013	100	Plant filing fee	
1014	300	2014	150	Reissue filing fee	
1005	200	2005	100	Provisional filing fee	
SUBTOTAL (1)					(\$) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
-20 **	= 0	X	= 0
Independent Claims	-3 **	= 0	X
Multiple Dependent		= 0	

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple dependent claim, if not paid
1204	200	2204	100	** Reissue independent claims over original patent
1205	50	2205	25	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 0

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	500
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1000	2403	500	Request for oral hearing	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1500	2453	750	Petition to revive - unintentional	
1501	1400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$)500

4. SEARCH/EXAMINATION FEES

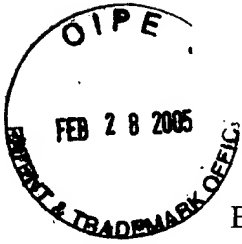
1111	500	2111	250	Utility Search Fee	
1112	100	2112	50	Design Search Fee	
1113	300	2113	150	Plant Search Fee	
1114	500	2114	250	Reissue Search Fee	
1311	200	2311	100	Utility Examination Fee	
1312	130	2312	65	Design Examination Fee	
1313	160	2313	80	Plant Examination Fee	
1314	600	2314	300	Reissue Examination Fee	

SUBTOTAL (4) (\$)0

SUBMITTED BY

Name (Print/Type) John E. Curtin Registration No. (Attorney/Agent) 37,602 Telephone (703) 668-8000
Signature Date February 28, 2005

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Serial No. 09/818,616
Atty. Ref. 29250-000903/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appeal No. _____

Appellants: Katherine G. AUGUST et al.

Application No.: 09/818,616

Group No.: 3627

Filed: March 28, 2001

Examiner: Richard E. Chilcot, Jr.

For: SYSTEMS AND METHODS FOR CONDUCTING WIRELESS
TRANSACTIONS

Attorney Docket No.: 29250-000903/US

BRIEF ON APPEAL ON BEHALF OF APPELLANT

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Mail Stop Appeal Brief - Patents

February 28, 2005

03/02/2005 BABRAHA1 00000045 09818616
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BRIEF ON BEHALF OF APPELLANT

In support of the Notice of Appeal filed January 10, 2005, appealing the Final Rejection mailed September 9, 2004, Appellant hereby provides the following remarks.

I. REAL PARTY IN INTEREST

The present application is assigned to Lucent Technologies Inc., by an Assignment recorded on March 28, 2001, Reel 011684, Frame 0811.

II. RELATED APPEALS AND INTERFERENCES

The Appellant does not know of any appeals or interferences which would directly affect or which would be directly affected by, or have a bearing on, the Board's decision in this Appeal.

III. STATUS OF THE CLAIMS

The claims reproduced in the attached Appendix A are the claims on Appeal. Each of these claims is currently pending in the application.

IV. STATUS OF ANY AMENDMENTS FILED SUBSEQUENT TO THE FINAL REJECTION

A Request for Reconsideration ("Request") dated December 6, 2004 was filed with the U.S. Patent and Trademark Office in response to the Final Rejection and was considered and entered according to an Advisory Action dated January 26, 2005. The Advisory Action indicates that the Request did not place the application in condition for allowance.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to customer/vendor transactions which occur at vendor transaction facilities, for example, at a drive-through restaurant.

It is estimated that 60% of all business for fast food chains takes place at a drive-through window. The most significant problems encountered in adequately managing that portion of the

business include conducting the cash portion of the transaction due to the overlap of walk-in, as well as drive-through, customers; and communication between the customers and fast food chain employees through microphone speakers, etc., in a noisy environment which might include traffic and car noise. Such noise significantly degrades the quality and understandability of the speech transfer between the customer and employee. In addition, menus at such drive-through windows are often static and not easily changed. Cash is also the primary form of payment and the cash transaction slows throughput of the food delivery process. (See Specification, page 1.)

What is needed is a more efficient process for conducting customer/vendor transactions, for example, those which occur at drive-through or other vendor transaction facilities.

As indicated above, the present invention provides a wireless communication system for ordering from a vendor transaction facility, for example, a fast food restaurant having a drive-through window. The ordering is over a temporary wireless communication established between a mobile wireless device associated with a customer and a fixed wireless device provided at a vendor transaction facility. Although the invention will be described below using a drive-through restaurant as an exemplary embodiment, this is but one of many applications for the invention. The invention may be used and adapted to any type of customer interaction with a vendor transaction facility, for example, a video store, drug store, or other type of store or service provider facility.

Figure 1 (Appendix B) illustrates a first embodiment of the invention. The mobile wireless device is illustrated in Figure 1 as a personal wireless device 11, two such devices being shown in Figure 1. Personal wireless device 11 may include a personal digital assistant, wireless laptop computer, wireless telephone or other personal wireless device having a transceiver for

sending and receiving messages. Preferably, personal wireless device 11 has a transceiver which is Bluetooth™, compliant as is a transceiver 15 provided at the vendor transaction facility 13. A Bluetooth™ compliant transceiver is capable of establishing a communication path in a process called bonding to one or more other Bluetooth™ compliant transceivers, as set out in the well-known Bluetooth™ protocol.

The vendor transaction facility 13 is illustrated as including transceiver 15, a control circuit 17, memory 18, a fulfillment station 19, for example, an order delivery station where a customer can pick up an order, an agent station 21 which may be associated with a point-of-sale station 25, a display device 27, and an input device 29. The vendor transaction facility 13 may also include an application server 23 as an option. The vendor transaction facility 13 may also be connected by a network 31 which may be a LAN, WAN wireless network, or Internet, etc., to a corporate server 33 for purposes for monitoring transactions and inventory administration. For purposes of simplifying further discussion, network 31 will be assumed to be the Internet and server 33 a corporate web server which is connected to the vendor transaction facility through the Internet. The vendor transaction facility may also be connected by network 31 to another vendor transaction facility 13a to enable the other transaction facility 13a to handle all or part of a transaction, or order fulfillment, for a customer in communication with vendor facility 13, as will be more fully described below. (See Specification, pages 3-5.)

The construction of the personal wireless device 11 is illustrated in greater detail in Figure 8 (Appendix G). It includes a transceiver 201, a control circuit 203, memory 208, an input device 205, an optional GPS position detector 209, a display 207, an audio input device 215, an audio output device 217, a speech 15 coder 211, and a speech decoder 213. It should be

noted that the personal wireless device 11 may have other circuits as well to enable its usual functionality, for example, as a personal digital assistant, wireless telephone, wireless computer, etc. In addition, several of the elements illustrated in Figure 8, for example, control circuit 203, input device 205, display 207, transceiver 201, among others, may also be used by the personal wireless device 11 in providing its usual functionality.

The operation of the embodiment illustrated in Figure 1 will now be described with reference to the flow charts on Figures 5 and 6 (Appendices E and F) which respectively illustrate the operation of a personal wireless device 11 and the vendor transaction facility 13, respectively. Turning first to the operation of the personal wireless device 11 in Figure 5 (Appendix E), when first enabled for ordering, a display is presented to a user of the various goods and/or services which may be selected. For example, the control circuit 203 may consult and operate display 207 to display available types of products or services such as lodging, fast food, video stores, etc. From display of types of products or services which occurs at processing segment 101, a customer can view on display 207 and selection processing segment 103, one of the listed types of products/services. For example, the customer may select fast food restaurants from the list as displayed in processing segment 101. (See Specification, pages 5-6.)

The control circuit 203, in response to selection of a particular 10 product/service by a user, next determines what vendor facilities are within the immediate area of the personal wireless device 11. In the example of fast food restaurant in processing signal 101 as a selection, a list of all fast food restaurants within the immediate vicinity of the second wireless device 11 is displayed. There are several methodologies by which the location of personal wireless device 11 can be determined. As illustrated in Figure 8, the personal communications device 11 may be

configured with a GPS receiver 209 which determines the position of the wireless communications device 11. From this, control circuit 203 may consult a pre-stored look-up table in memory 208 to determine which fast food restaurants are located within a predetermined vicinity, e.g., a few miles, of the wireless communications device 11.

Alternatively, control circuit 203 may cause display device 207 to display a series of regional maps from which a user can select a defined area in which the user is currently located. This is illustrated in processing segment 105 of Figure 5. Other methods may also be used to determine an area in which a user is located, and to thereby consult memory 208 to determine which fast food restaurants are within that area.

Referring again to Figure 5, after control circuit 203 searches for and identifies vendors in the area in which the personal communications device 11 is located, these vendors are then indicated to a user of the communications device 11, either by way of visual display 207 or by way of an audio output 217.

After a user receives an indication of available vendors for the selected type of product/service, the user then operates a keypad or other selection device, e.g., touch screen, mouse, audio or speech command, etc., at the personal communications device 11 to select a vendor, as illustrated in processing segment 113. (See Specification, pages 6-7.)

Once the control circuit 203 receives this selection, it initiates communications with a selected vendor in processing segment 115 by operating transceiver 201 to cause a temporary wireless connection to be established with a vendor transaction facility 13. The communication may be, as noted, through a BluetoothTM compliant communications channel. The procedures for establishing BluetoothTM wireless links are well known in the art and are defined in the

BluetoothTM specification and will not be described in detail herein. Other open standard or proprietary wireless communications protocols may also be used to establish a wireless communication channel between a personal communications device 11 and a vendor transaction facility 13 transceiver 15.

In addition, as shown below in connection with Figure 2 (Appendix C), it is also possible for the customer device 11 to be a cellular phone, digital message service device or web based communications device in which case communications between the device 11 and transceiver 15 can be over a cellular, PCS, digital message, or other communications path which connects to a network 35. In this case the network operator can provide a provisioning service in which a service and/or configuration of a service can be established for an individual, class of customers, users, etc., where the customer or provisioning agent of the network operator selects the contents of the service to be provided to an individual or class of customers. For example, a cellular or web based customer can view a list of fast food restaurants on a web page provided by the network operator (or listen to audio prompts) and can indicate which fast food restaurants should be included in his or her menu of services to appear (or be heard) on his or her mobile web device (cell phone) when the customer connects to a predetermined address. These selections can be changed, modified or deleted. After passing through the network 35, the customer connects with a particular vendor transaction facility. (See Specification, pages 7-8.)

Returning to Figure 5, once the communication channel is established between a customer and a vendor transaction facility 13 (Figure 1) either directly or through a network provider (Figure 2), the personal communications device 11 sends customer identification, location information and also sends and receives order information to and from a wireless link at

the vendor transaction facility 13. When the order process is completed, the communication channel between the personal communications device 11 and vendor facility 13 is terminated, as indicated in processing segment 119.

The information which is exchanged during processing segment 117, 20 such as customer ID and other order and payment information, will be described in greater detail with reference to the processing carried out at the vendor transaction facility 13, as illustrated in Figure 6 (Appendix F).

Referring to Figure 6, which shows a flow chart of the operations performed at the vendor transaction facility 13 by the control circuit 17, at an initial processing step 121, the control circuit 17 monitors transceiver 15 to see if a customer communication has been detected. That is, control circuit 17 checks if a personal wireless device 11 is trying to establish a wireless communications channel with the vendor transaction facility 13. If so, the control circuit 17 instructs the transceiver 15 to establish a communications channel with the personal wireless device 11.

In processing segment 123, control circuit 17 next records a received customer identification, customer location, the time of the transaction, the location of the vendor transaction facility 13, and initiates a record of the transaction. In association with this, the control circuit 17 may also pull a customer profile from a database for a customer who is a returning customer. (See Specification, pages 8-9.)

This profile may be stored in memory 18, or may be pulled from of a corporate web server 33 via the Internet network 31. Alternatively, the customer profile can be pulled from an application server 23 which is optionally provided at the vendor facility 13. For a new customer,

the control circuit 17 may initiate and store a new customer profile. The customer profile may also be stored in memory at the customer's personal wireless device 11 in which case it is transmitted from device 11 to the vendor transaction facility 13, along with the other customer information. Control circuit 17 receives the profile, updates it as necessary during a transaction, and transmits the updated profile back to the customer device 11 for storage.

The control circuit 17 may also prompt a customer in processing segment 124 to see if the customer needs directions to the vendor transaction facility 13. If the customer sends a response indicating that directions are needed, as detected in processing segment 126, control circuit 17 formulates such directions and sends them to the customer device 11 in processing segment 128. The directions can be sent as a general fixed set of directions to the vendor facility, or may be specifically tailored based on the received customer location information and the known location of the vendor transaction facility 13.

The customer identification information can be used by control circuit 17 to begin building a customer profile for new customers and can also enter and use the information in customer priority and customer loyalty databases. (See Specification, pages 9-10.)

If a customer profile is available, it may indicate that the customer has a standing order, that is, an order which the customer usually places. If so, the control circuit 17 operates transceiver 15 to send a prompt to the customer requesting whether or not the customer wants to order per the standing order or wants to place a new order in processing segment 127. If there is no existing customer profile, the control circuit 17, merely prompts the customer for a new order in processing segment 127. The customer profile may also indicate the importance of the customer to the vendor which may be used to establish an order or fulfillment priority when

several customers are accessing a vendor transaction facility, or to provide special promotional deals for the customer.

Referring again to Figure 6, the customer profile may also indicate a favorites list of items which can be sent to a customer when a customer chooses to place a new order.

The control circuit 17 checks transceiver 15 for a response from the customer in processing segment 129, which response will indicate whether a standing order or a new order is to be placed. As noted, customer may enter any information required during the ordering process by keyboard, mouse, touch screen, audio command, or any other type of information input device. If the customer response indicates that a standing order is to be placed, control circuit 17 moves from processing segment 129 to processing segment 131, where a standing order is prepared. The standing order is then totaled and the amount due for the order is sent to the customer in processing segment 133, and a processing payment routine is executed by control circuit 17 in processing segment 135. This entails receiving payment information from the customer in response to the amount due information which was sent in processing segment 133. Payment may be in the form of a credit card, debit card, prepaid card or other account information which is received from the customer in processing segment 135, and which is executed by an account transaction module shown as processing segment 147. This account information may be entered by a customer at the personal communications device 11, or it may be pre-stored at the personal communications device 11 and sent by customer command upon receipt of an amount due from the vendor transaction facility or it may be stored in the network, e.g., at server 33 or in memory 18 of a vendor transaction facility, or at optional server 23. Account authorization can be conducted over a secure financial link between a customer device

11 and a vendor transaction facility 13 and between the vendor transaction facility 13 and an authorizing authority.

Once payment transactions have been completed, control circuit 17 moves to a schedule delivery processing segment 137 which sets the order for delivery and instructs delivery in processing segment 139. For a fast food restaurant, for example, processing segments 137 and 139 will result in the order being made available for customer delivery at a fulfillment station 19 (Figure 1, e.g., at a drive-in window).

Referring back to processing segment 133 in Figure 6, as an adjunct to totaling an order, the control circuit 17 also performs an inventory check in processing segment 141. The customer order will only be totaled if sufficient inventory exists for processing the order. If insufficient inventory exists to process the order, that will be indicated to the customer as part of the total order processing segment 133.

Assuming that the inventory is sufficient to fulfill the order, control circuit 17 then sends the order to the fulfillment station 19 in processing segment 143, after which the inventory and delivery processor associated with the vendor transaction facility 13 is updated at processing segment 145. The inventory/delivery processor may be the optional application server 23 at the vendor transaction facility, or may reside as the web server 33, connected to control circuit 17 through the Internet 31. The inventory and delivery processor may also be the control circuit 17 itself. (See Specification, pages 10-12.)

Referring again for a moment to processing segment 137 of Figure 6, order delivery is scheduled after the order has been sent to fulfillment and proper payment processing has

occurred in processing segment 135. Once these events have both been completed, then an order is set for delivery at processing segment 139 at the fulfillment station 19.

Referring back to processing segment 129, if a standing order is not selected by a customer, meaning that a new order will be taken, the control circuit 17 composes a menu of item selections in processing segment 149. In conjunction with this, it may pull current menu items from a local or remote location in processing segment 151. Once again, these menu items may reside on an optional application server 23 provided at the vendor facility 13, or on a web server 33 connected to control circuit 17 by the Internet 31, or may be provided in memory 18 associated with control circuit 17. In addition, control circuit 17 can pull a list of favorite items from the customer profile which are items which the customer typically selects when placing an order.

Once the menu selections have been composed in processing segment 149 they are sent by the control circuit through transceiver 15 in processing segment 153 to the customer. The control circuit 17 then awaits a customer input which, when received from transceiver 15, is used to prepare an order in processing segment 156. As noted, customer selection input may be by any convenient entry device such as a keyboard, mouse selection, touch screen, audio command, etc. The customer may also input an order complete indication when no further selections are desired. In processing segment 157, control circuit 17 analyzes a customer input selection and determines whether ordering is complete and, if so, proceeds to processing segment 133 where the order is totaled, and all other operations described above which follow the order totaling at processing segment 133 are executed. (See Specification, pages 12-13.)

If the order is determined to not be complete in processing segment 157, the control circuit 17 processes the customer's order selection and returns to processing segment 153, where it again sends the menu to a customer; receives a customer order selection or order complete indication in processing segment 155; updates the order in processing segment 156 if an order selection was entered by a customer; and again checks to see if the order is complete in processing segment 157. This process repeats until the customer indicates that the order is complete, as detected at processing segment 157.

Once the order is determined to be complete in processing segment 157, the control circuit 17 proceeds to the total order processing segment 133, and processing proceeds as described above with respect to all processing segments which follow the total order processing segment 133.

Figure 1 also illustrates an agent station 21 which may include a point-of-sale terminal 25, as well as a display 27 and an input device 29. The agent station 21 provides a supervisory function for the order processing described above with respect to Figures 5 and 6. As such, the agent station 21 z, may have its own control circuit or may operate off the control circuit 17 of the vendor transaction facility 13. In either event, the functions executed by the agent station 21 are illustrated by the flow chart depicted in Figure 9 (Appendix H). (See Specification, pages 13-14.)

The agent station 21 acquires and displays all orders currently in progress from all wireless customers. It also deletes any completed orders from the display in processing segment 301. For example, customers may be arranged by the control circuit for the agent station 21 in a customer queue, such as first-in-first-out (FIFO) queue as shown in Figure 10 (Appendix I).

This queue may be maintained by the control circuit 17 or by a control circuit provided at the agent station 21, or even by application server 23. In any event, the agent station 21 has access to the stored information shown in Figure 10 (Appendix I).

As illustrated, the information which is displayed by agent station 21 on display device 27 includes the arrival time of each customer, that is the time the communication was initiated between the customer and the vendor transaction facility 13, an indication of whether or the payment and inventory 20 aspects of the transaction have been completed (the M Commerce column), an indication of the number of the order, including number of items and what they are, an indication of whether those items are available, an indication of whether or not the order has been completed, an indication of the transaction number, an indication of the distance or location of the customer from the vendor transaction facility 13, an estimate of the time of arrival, and a prediction of which customers will be processed in what order. Thus an agent at the agent station 21 is able to completely view all pending orders and their status for possible problems and consequent intervention and fulfillment can be organized and monitored.

Referring back to Figure 9, in addition to the display of the orders which are being processed for all customers, the agent station may also display, in processing segment 302, customers locations relative to the vendor transaction facility 13, for example, as shown in Figure 3 (Appendix D). (See Specification, pages 14-15.)

Figure 3 shows the location 41 of the vendor transaction facility 13 overlaid on a street map, including streets 43 and 45 and, in addition, shows the locations of the customers, here illustrated as customers X_1 , X_2 and X_3 . Thus an agent at agent station 21 not only sees the status of all orders in progress, but also sees the relative locations of the customers to the vendor

transaction facility 13. One or both of the displays illustrated in Figure 10 and Figure 3 can also be provided with an input selection device so that a transaction agent can select a particular customer for communications therewith.

Referring back to Figure 9, the agent station 21, or control circuit 17, may be provided with indication circuitry to indicate a problem in the order. For example, as illustrated in Figure 10, if the time that the order has been pending exceeds a predetermined time period, that customer order would be flashed on the display screen 27 at the agent station 21. Other conditions for triggering an alarm might include: unavailability of all items selected by a customer, customer arrival at vendor facility before the order has been completed, and other alarm indications. An agent can respond to these indications by selecting a customer for communication.

Thus, returning to Figure 9, if an alarm condition is indicated as requiring supervisory intervention as detected at step 303, an agent may make an entry on input device 29 and establish an audio communication with a selected customer, as illustrated in processing segment 305. As a result of that communication, a supervisor personnel may revise an order entry 307 including changing an item ordered, or perhaps even deleting an order, which is then sent to update order processing segment 309. This in turn serves to update the orders which were prepared in either processing segment 131 or processing segment 156. (See Specification, pages 15-16.)

It should be noted that other alarm conditions may also be flagged for the attention of the supervisor in processing segment 303. One such alarm indication might be that the system which is receiving information from the customer cannot decipher the customer's input. In such case, once again, an alarm flag will be indicated on the display 27 by, for example, a flashing

customer input which will alert a supervisor for the need to establish an audio communication with a customer to clarify the order. Another possible alarm condition might be that the vendor transaction facility 13 cannot fulfill the order or that order fulfillment will take too long, in which case a supervisor at agent station 21 can communicate that information to a customer and either direct the customer and order to another fulfillment station, or provide the customer with an anticipated time when fulfillment can be completed.

The agent station 21 communication, as established in processing segment 305, is conducted through control circuit 17 operating transceiver 15 to enable an audio communication between a personal wireless device 11 and the agent station 21. The audio communications at the personal wireless device 11 are conducted through the audio input 215 and output 217 circuits and associated speech coder 211 and decoder 213. Similar audio elements including input circuit 16, audio output circuit 22, speech coder 18, and speech decoder 20 are provided at the vendor transaction facility in association with the agent station 21.

Order taking and processing also need not occur exclusively at the vendor transaction facility which is in wireless communication with a customer, but may occur at any vendor transaction facility which is connected to network 31. Thus, if an equipment problem occurs at the vendor transaction facility 13 which is in wireless communication with a customer, responsibility for taking and completing the order can be passed onto another vendor transaction facility through network 31. (See Specification, pages 16-17.)

The agent station 21 at one facility 13a may also be used to monitor orders at a different vendor transaction facility 13 by communications with the different transaction facility over network 31. For example, if a customer operating a personal wireless device 11, which is in

wireless communication with a first vendor transaction facility 13, is not fluent in English, making communications difficult, an operator at agent station 21 of the facility 13 which is in wireless communication with the customer can transfer responsibility for supervising and processing the transaction to a different facility 13a and associated agent station 21 where an operator may be fluent in the customer's native language. This occurs by an agent requesting control circuit 17 by input at agent station 21 to pass the order and transaction information associated with the customer to the other vendor transaction facility 13a through network 31. It is also possible for a control circuit 17 to pass the order and transactional information to another vendor transaction facility 13a automatically if a customer profile, or the content of an order, or a particular implementation indicates that another vendor transaction facility 13a is better able to process the order.

Thus, an order originating at one vendor transaction facility 13 can be supervised and processed by any other vendor transaction facility 13a coupled to network 13. Once the order is processed to completion, fulfillment occurs at the vendor transaction facility which is in wireless communication via transceiver 15 with the customer. This way, an order can be processed by any of the vendor transaction facilities with fulfillment occurring at that particular facility which is in wireless communication with the customer. This operation is transparent to the customer.

Although the invention has been primarily described with relation to using a personal wireless device 11 which establishes a direct wireless link to a transceiver 15 located at a vendor transaction facility 13, the invention may also be used with a conventional cellular, PCS, digital message or web based cellular network. This is illustrated in the Figure 2 (Appendix C) embodiment of the invention. (See Specification, pages 17-18.)

Figure 2 differs from Figure 1 in illustrating a network 35 in between a transceiver 15 and a control circuit 17. Network 35, for example, may be a conventional cellular network or a cellular network and/or Internet network. In this embodiment, the personal wireless devices are cell phones or web based wireless communications devices. In this instance, the transceiver 15 is provided by a network operator, for example, a cellular operator; and the initial connection is established in conventional fashion. For example, for a cellular telephone, a customer would dial up a number of the vendor transaction facility 13. This customer and order information would be received by transceiver 15 which in this instance would be a cellular base station, which would make a connection to the vendor transaction facility 13 through a cellular network 35 or even through an Internet connection. In this manner, the customer may place an order using the cellular phone or web based communications device. If the customer has a web based wireless communications device, the transceiver 15 would again be provided by the network operator, and it would in turn be connected into a network 35 which, in this case, would be the Internet to the vendor transaction facility 13. All other aspects of the second embodiment of the invention operate the same as described above with respect to the first embodiment.

Figure 7 (Appendix G) illustrates changes to the vendor transaction facility 13 software when a cell phone or web based communicator is used by a customer. Thus, referring to Figure 7, when an incoming call is received at a vendor transaction facility 13 as detected by the control circuit 17 of Figure 2, the control circuit then proceeds to determine customer identification and location at processing segment 163. Location information can be acquired by a customer keying in his location on the cellular telephone or other web based communicator, or, if that device includes a GPS receiver, GPS coordinate information can be sent manually or automatically by

the customer to the vendor transaction facility 13. Once customer location information is received at processing segment 163, then processing proceeds in the manner illustrated in Figure 6 beginning at processing segment 123.

When a cellular or web based system as illustrated in Figure 2 is used, it is possible for the network operator, e.g., a cellular operator, or even an ISP for the Internet, to provision the customer's communication before sending it to the vendor transaction facility 13. Thus, the network operator or ISP may have stored information associated with the customer, such as preferred vendors or ordering information, customer priority information, etc., so the customer only needs to dial one phone number to the network operator or ISP to initiate an order and the cellular operator or ISP can retrieve stored vendor or other order preferences for the customer and direct the communication to a preselected vendor transaction facility 13.

Figure 4 (Appendix D) illustrates how a plurality of vendor transaction facilities 13a . . . 13c can be connected through a network 31 to a corporate server 33 and in turn a display 39. Thus, referring back to the embodiments of Figure 1 and Figure 2, network 31 of Figure 4 corresponds to the same numbered networks in these figures.

The corporate server 33 can receive information about the customer 10 orders at the various locations, e.g., information C1a, C1b, C1c, for customer transactions occurring at vendor transaction facility 13a, information C2a, C2b, C2c, for customer transactions occurring at vendor transaction facility 13b, and information C3a for customer transactions occurring at vendor transaction facility 13c. The corporate server 33 can in turn use the information on customer orders for inventory management, accounting, marketing and other corporate back room functions. (See Specification, pages 18-20.)

It should be noted that although the invention has been described in Figure 10 with respect to a customer ordering queue which is based on a first-in-first-out basis, the queue can also be arranged in the invention in other queue ordering, such as time to fulfillment, customer distance from fulfillment station, preferred customer, or other order priority sequence. In addition, as noted, the invention has been primarily described in the embodiment of Figure 1 with reference to using a BluetoothTM compliant communications link or a wireless LAN IEEE 802.11 compliant communications link. However, as noted, other types of communications links may also be employed based on proprietary or standardized technology, for example, PICO, GSM, UMTS GSM as well as others.

In addition, when the vendor transaction facility 13 communicates menu selections and other order information to a customer from a vendor transaction facility 13, the facility may also transmit current promotional specials to the customer for review and possible selection. In addition, although a speech recognition unit and a speech synthesis unit have been described with respect to the embodiments above, it should also be appreciated that other types of communications units can be used to provide communications between the customer and the vendor transaction facility, such as beeps, vibrations, flashing lights, etc.

In addition, although customer payment has been described in terms of conventional payment mechanisms, such as credit card, debit card, prepaid account, etc., it is also possible to charge a customer's network account, e.g., Internet account, telephone account, a phone card, SIM card or other type of account for a transaction. (See Specification, pages 20-21.)

In yet another variant of the invention, it is also possible to provide the vendor transaction facility 13, and specifically the control circuit 17 thereat, with the ability to continually broadcast

via transceiver 15 to possible personal wireless devices 11 which may be in the vicinity of transceiver 15 to initiate and establish a communications link therewith. In such instances, the control circuit 17 can be configured to provide menu selections, promotional specials and other information in an attempt to entice a customer to engage in placing an order. If a customer responds to a solicitation, ordering can proceed as discussed above with reference to Figures 5 and 6.

Although the invention has been primarily described with respect to the delivery of goods to a customer, the invention can also be used for the delivery of services as well. For example, the invention could be used to order car washes, dry cleaning, hair cuts, or any type of service which can be fulfilled at a fulfillment station, or in the case of dry cleaning, can be dropped off at a fulfillment station.

The control circuits 17 and 203 may be formed of computer circuits, such as stand alone computers and processors, with associated memory, or may be formed as other programmable or hard-wired logic devices, or a combination of hardware devices and programmable devices. In addition, one or more or all of the functions performed by the control circuit 17 can be performed by a local 23 or remote 33 server, which servers can also function as the control circuits, or the functions performed by control circuit 17 can be distributed and shared among control circuit 17, local 23 and remote 33 server, in which case the control circuit 17, local 23 and remote 33 servers function as a seamless control circuit. (See Specification, pages 21-22.)

Still further, it is also possible with any of the exemplary embodiments to have all transaction processing for a customer handled by a remote server, e.g., with server 33 with the control circuit 17 primarily functioning to relay order information between a personal wireless

device 11 and the web server 33, and instructing the order fulfillment station 19 to fulfill an order under instruction of web server 33.

The invention also permits system structuring so that different functions on the vendor side can be performed by different parts of the system, for example, two or more transaction facilities 13, 13a can perform different aspects of an order, and the remote 33 and local 23 (if provided) servers can handle parts of the order processing as well. Accordingly, ordering, fulfillment and agent operations can each be easily and independently optimized. (See Specification, pages 22-23.)

Appellants respectfully note that the above summary of the invention, including any indication of reference numerals, drawings, figures, paragraphs, page numbers, etc. (collectively referred to as “descriptions” of the application) have been provided solely to comply with the U.S. Patent and Trademark Office’s rules concerning the appeal of the claims of the present application. As such, the descriptions above are merely exemplary and should not be construed to limit the claims of the present application in any way whatsoever.

VI. ISSUES TO BE REVIEWED ON APPEAL

- (i) Whether claims 1, 10-35, 40-42, 46-49, 51-54, 57 and 61 are anticipated by either U.S. Patent No. 6,397,718 to Fano (“Fano”) or U.S. Patent No. 6,577,861 to Ogasawara (“Ogasawara”) based on 35 U.S.C. §102(e)?
- (ii) Whether claims 62-70 and 72-77 are anticipated by Fano or Ogasawara under 35 U.S.C. §102(e)?
- (iii) Whether claims 80-83 are anticipated by Fano or Ogasawara under 35 U.S.C. §102(e)?

- (iv) Whether claims 84, 91-95, 98 and 99-101 are anticipated by Fano or Ogasawara under 35 U.S.C. §102(e)?
- (v) Whether claims 102-105, 107 and 108 are anticipated by Fano or Ogasawara under 35 U.S.C. §102(e)?
- (vi) Whether claims 3, 4, 6-9, 44, 45 and 59 are obvious based on Fano or Ogasawara in combination with U.S. Patent No. 4,553,222 to Kurland (“Kurland”)?
- (vii) Whether claim 5 is obvious based on Fano or Ogasawara in combination with U.S. Patent No. 5,839,115 to Coleman (“Coleman”)?
- (viii) Whether claims 49 and 50 are obvious based on Fano or Ogasawara in combination with U.S. Patent No. 6,587,835 to Treyz et al. (“Treyz”)?
- (ix) Whether claims 55, 56, 71, 78, 79, 96, 97 and 106 are obvious based on Fano or Ogasawara in combination with Treyz?

VII. ARGUMENTS

A. The Section 102 Rejections

i. The Section 102 Rejections of Claims 1, 10-35, 40-42, 46-49, 51-54, 57 and 61

The above indicated claims were rejected based on 35 U.S.C. §102(e) as being anticipated by either Fano or Ogasawara. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Of the above-indicated claims, claim 1 is the only independent claim. For present purposes, Appellants will direct their attention to the features of claim 1 from which the remaining claims depend.

Claim 1 requires, among other things,

“a wireless apparatus for processing customer orders comprising: a communications transceiver for broadcasting a wireless signal to establish a wireless communications link with a mobile customer within a predetermined distance of a vendor facility”

and

“a control circuit” coupled to the transceiver to, among other things, receive “a wireless order from said customer” and cause the received order “to be processed to fulfillment.”

Neither Fano nor Ogasawara discloses or suggests an apparatus that processes customer orders. In addition, neither discloses or suggests an apparatus that includes a transceiver which broadcasts a wireless signal to a mobile customer, and a control circuit which: establishes a link with the customer, receives an order from a customer and causes the order to be processed to fulfillment, as in claim 1 and its dependent claims.

Instead, Fano appears to disclose the use of object oriented programming (OOP) and associated program code within a GPS receiver to allow a user of the receiver to receive items of interest for sale in stores currently closest to the shopper/user. There is no hint in Fano, much less a disclosure or suggestion, of an apparatus which processes a customer order which includes the claimed broadcasting transceiver and control circuit. The only signal which is broadcast comes from a satellite hovering in geosynchronous orbit around the earth. There is no disclosure or suggestion in Fano that this satellite is responsible for processing a customer order or causing an order to be processed to fulfillment, as is required by claim 1 and its dependent claims.

In addition, Appellants note that the claimed transceiver broadcasts a wireless signal to establish a wireless communications link with a mobile customer within a predetermined

distance of a vendor facility. In contrast, the signal which is broadcast from Fano's GPS satellite may be sent to a user regardless of the distance the user is from a store or from the satellite itself.

Accordingly, because Fano does not disclose each and every feature of the claimed inventions, Fano cannot anticipate claim 1 and its dependent claims.

Turning now to Ogasawara, it too fails to disclose a transceiver which broadcasts a wireless signal to establish a wireless communications link with a mobile customer and a control circuit which, among other things, receives a wireless order from the customer and causes the order to be processed to fulfillment, as in claim 1 and its dependent claims.

Instead, Ogasawara appears to be directed at a combination of a wireless telephone and a bar code scanner which are used to purchase items from a store or receive information about items which can be so purchased. Ogasawara does not disclose any type of transceiver which broadcasts a wireless signal to establish a wireless communications link with a mobile customer. Instead, Ogasawara repeatedly makes reference to a customer dialing the telephone number of the store in order to establish a link. This is the opposite of the present invention (see Ogasawara, column 10, lines 5 and 6; column 10, lines 19 and 20; column 16, lines 11-16).

Claim 1, and its dependent claims, also requires that the link which is established with the mobile customer be so established within a predetermined distance of a vendor facility. There is no disclosure or suggestion in Ogasawara that the connection between a purchaser and a store server 10 or remote server 26 need be within a predetermined distance of the store server 10 or remote server 26.

Accordingly, because Ogasawara does not disclose each and every feature of claim 1 and its dependent claims, Ogasawara cannot anticipate these claims.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 1, 10-35, 40-42, 46-49, 51-54, 57 and 61.

ii. **The Section 102 Rejections of Claims 62-70 and 72-77**

Claims 62-70 and 72-77 were also rejected based on either Fano or Ogasawara under 35 U.S.C. §102(e). Appellants respectfully disagree and traverse these rejections for at least the following reasons.

While claim 1 is directed at a wireless apparatus for processing customer orders (which may be located, for example, at a vendor location), claims 62-70 and 72-77 are directed at a personal wireless communications apparatus for wirelessly placing a customer order (which, for example, is located with a mobile customer).

Of claims 62-70 and 72-77, claim 62 is the only independent claim. For present purposes, Appellants' comments will be directed at claim 62, it being understood that the same comments apply to claims 63-70 and 72-77 as well.

The personal wireless communications apparatus of claim 62 requires, among other things, a wireless transceiver for transmitting and receiving order information when the personal wireless communications apparatus "is within a predetermined range of a vendor facility broadcasting a wireless signal." As indicated above, neither Fano nor Ogasawara discloses or even suggests the broadcast of a wireless signal from a vendor facility. Instead, the signal which is broadcast in Fano comes from a geosynchronously orbiting satellite while in Ogasawara it is a purchaser, or mobile user, which initiates contact with a vendor facility or store; there is no broadcast of a signal whatsoever from the vendor facility.

Accordingly, because neither Fano nor Ogasawara discloses each and every feature of claim 62, and its dependent claims, neither can anticipate claim 62 and its dependent claims.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 62-70 and 72-77.

iii. The Section 102 Rejections of Claims 80-83

Claims 80-83 were also rejected based on 35 U.S.C. §102(e) using either Fano or Ogasawara. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Claim 80 is the only independent claim within this group of claims and it is to the features of this claim which we will now turn.

Claim 80 is directed at a wireless apparatus “at a vendor facility” which comprises:

“a communication transceiver for broadcasting a wireless signal to establish a wireless communications link with potential customers within a predetermined distance of the vendor facility, and a control circuit, coupled to the transceiver,”

for, among other things, attempting to

“establish a link with a potential customer, and if a link is established, for transmitting an order solicitation message to the potential customer over the established link.”

As indicated above, neither Fano nor Ogasawara disclose an apparatus located at a vendor facility which comprises a transceiver for broadcasting a wireless signal to establish a link with customers within a predetermined distance of a vendor facility. Instead, the signal which is broadcast in Fano comes from a geosynchronous orbiting satellite while there is no signal broadcast in Ogasawara whatsoever.

Accordingly, because neither Fano nor Ogasawara discloses each and every feature of claim 80 and its dependent claims, neither Fano nor Ogasawara can anticipate claims 80-83. Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 80-83.

iv. **The Section 102 Rejections of Claims 84, 91-95, 98 and 99-101**

Claims 84, 91-95, 98 and 99-101 were also rejected under 35 U.S.C. §102(e) as being anticipated by either Fano or Ogasawara. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

These claims are directed at a method for processing customer orders at a vendor transaction facility which comprises, among other things, the step of broadcasting a wireless signal to establish a wireless link with a mobile customer at a predetermined distance of a vendor transaction facility.

Rather than repeat the same arguments which have been presented above, Appellants respectfully submit that neither Fano nor Ogasawara discloses the broadcasting step which is required by claims 84, 91-95, 98 and 99-101.

Because neither Fano nor Ogasawara discloses each and every step of these claims, neither one can anticipate claims 84, 91-95, 98 and 99-101.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 84, 91-95, 98 and 99-101.

v. **The Section 102 Rejections of Claims 102-105, 107 and 108**

Claims 102-105, 107 and 108 were also rejected under 35 U.S.C. §102(e) as being unpatentable by either Fano or Ogasawara. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Again, rather than repeat the same arguments which have been presented above, Appellants respectfully submit that neither Fano nor Ogasawara discloses the broadcasting step which is required by claims 102-105, 107 and 108.

Because neither Fano nor Ogasawara discloses each and every step of these claims, neither one can anticipate claims 102-105, 107 and 108.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 102-105, 107 and 108.

B. **The Section 103 Rejections**

i. **The Section 103 Rejections of Claims 3, 4, 6-9, 44, 45 and 59**

Claims 3, 4, 6-9, 44, 45 and 59 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fano or Ogasawara in further view of Kurland. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Appellants note that Kurland does not overcome the deficiencies of Fano and Ogasawara noted above. For this reason, Appellants respectfully submit that claims 3, 4, 6-9, 44, 45 and 59 which are dependent on one of the independent claims mentioned above, are not rendered obvious by the combination of Fano or Ogasawara in view of Kurland.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 3, 4, 6-9, 44, 45 and 59.

ii. The Section 103 Rejection of Claim 5

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Fano or Ogasawara in view of Coleman. Appellants respectfully disagree and traverse this rejection for at least the following reasons.

Appellants note that claim 5 depends on claim 1 and that Coleman does not overcome the deficiencies of Fano or Ogasawara noted above with respect to claim 1.

Accordingly, Appellants respectfully submit that claim 5 is not rendered obvious by the combination of Fano or Ogasawara in view of Coleman. Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claim 5.

iii. The Section 103 Rejections of Claims 49 and 50

Claims 49 and 50 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fano or Ogasawara in view of Treyz. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Appellants also note that claims 49 and 50 depend on claim 1 and that Treyz does not overcome the deficiencies of Fano and Ogasawara mentioned above with respect to claim 1. Accordingly, for the reasons set forth above, Appellants respectfully submit that claims 49 and 50 are not rendered obvious by the combination of Fano or Ogasawara in view of Treyz.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 49 and 50.

iv. The Section 103 Rejections of Claims 55, 56, 71, 78, 79, 96, 97 and 106

Claims 55, 56, 71, 78, 79, 96, 97 and 106 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fano or Ogasawara in view of Treyz. Appellants respectfully disagree and traverse these rejections for at least the following reasons.

Initially, Appellants note that these claims depend on one or more of the claims discussed above and that Treyz does not overcome the deficiencies of Fano or Ogasawara discussed above. Accordingly, it is respectfully submitted that the combination of Fano or Ogasawara in view of Treyz does not render obvious claims 55, 56, 71, 78, 79, 96, 97 and 106.

Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner and grant allowance of claims 55, 56, 71, 78, 79, 96, 97 and 106.

IX. CONCLUSION

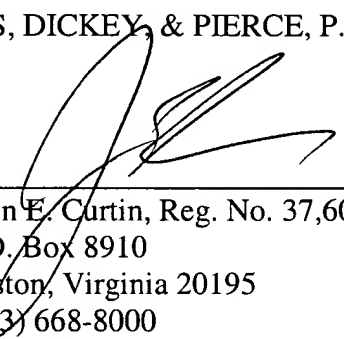
Accordingly, for at least the aforementioned reasons, Appellants respectfully request that the Honorable Members of the Board of Patent Appeals and Interferences reverse each of the outstanding rejections, and allow each of the pending claims, in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No.08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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APPENDIX A

1. (Previously Presented) A wireless apparatus for processing customer orders comprising;

a communications transceiver for broadcasting a wireless signal to establish a wireless communications link with a mobile customer within a predetermined distance of a vendor facility;

a control circuit coupled to said transceiver for controlling said transceiver to establish the communication link with the mobile customer and for receiving a wireless order from said customer, said control circuit causing said received order to be processed to fulfillment.

2. (Original) An apparatus as in claim 1 further comprising a display device, said control circuit causing said display device to indicate the locations of customers communicating with said transceiver.

3. (Original) An apparatus as in claim 1 further comprising a display device, said control circuit causing said display device to indicate the status of orders placed by customers communicating with said transceiver.

4. (Original) An apparatus as in claim 3 wherein said control circuit arranges customer orders in a queue and operates said display device to display the queue of customer orders.

5. (Original) An apparatus as in claim 1 wherein said control circuit communicates customer order information to an inventory control system.

6. (Original) An apparatus as in claim 4 wherein said customer orders are arranged in a first-in first-out queue.

7. (Original) An apparatus as in claim 4 wherein said customer orders are arranged in a queue based on customer distance from a fulfillment station.

8. (Original) An apparatus as in claim 4 wherein said customer orders are arranged in a queue based on time to fulfillment.

9. (Original) An apparatus as in claim 4 wherein said customer orders are arranged in a queue based on customer priority.

10. (Original) An apparatus as in claim 1 wherein said wireless communication link is a LAN IEEE 802.11 compliant communication link.

11. (Original) An apparatus as in claim 1 wherein said wireless communication link is a Bluetooth™ compliant communications link.

12. (Original) An apparatus as in claim 1 wherein said control circuit causes said transceiver to transmit menu items to a wireless customer.

13. (Original) An apparatus as in claim 1 wherein said control circuit causes said transceiver to transmit promotional specials to a wireless customer.

14. (Previously Presented) An apparatus as in claim 12 wherein said menu items are transmitted upon the establishment of the communications link with a customer.

15. (Original) An apparatus as in claim 14 wherein said menu items are transmitted until a customer completes an order.

16. (Previously Presented) An apparatus as in claim 13 wherein said promotional specials are transmitted upon the establishment of the communications link with a customer.

17. (Original) An apparatus as in claim 16 wherein said promotional specials are transmitted until a customer completes an order.

18. (Original) An apparatus as in claim 1 further comprising a speech recognition unit for receiving speech orders from a customer and converting them to processable information, said control circuit being coupled to said speech recognition unit to receive and process said processable information.

19. (Original) An apparatus as in claim 1 further comprising a speech synthesis unit, said control circuit operating said speech synthesis unit to provide speech information associated with customer orders which is transmitted by said transceiver to a customer.

20. (Original) An apparatus as in claim 18 wherein said control circuit converts said processable information into a customer order of an ordering system.

21. (Original) An apparatus as in claim 20 further comprising a display device, said control circuit causing said display device to display the entry of a customer order into said ordering system.

22. (Original) An apparatus as in claim 1 further comprising an agent station coupled to said control circuit for monitoring an order received from a customer.

23. (Original) An apparatus as in claim 22 wherein said agent station further comprises a display device for displaying the status of a customer order.

24. (Original) An apparatus as in claim 22 wherein said agent station includes an audio circuit which allows for audio communication with a selected customer.

25. (Original) An apparatus as in claim 1 further comprising an agent station coupled to said control circuit for adjusting an order received from a customer.

26. (Original) An apparatus as in claim 25 wherein said agent station is provided at a vendor transaction facility which contains said transceiver.

27. (Original) An apparatus as in claim 25 wherein said agent station is provided at a vendor transaction facility which does not contain said transceiver.

28. (Original) An apparatus as in claim 1 wherein said control circuit computes a monetary total for an entered order and causes said transceiver to transmit said monetary total to a customer.

29. (Original) An apparatus as in claim 28 wherein said monetary total is transmitted as a displayable amount.

30. (Original) An apparatus as in claim 28 wherein said monetary amount is transmitted as an audible amount.

31. (Original) An apparatus as in claim 1 wherein said control circuit processes payment information received through said transceiver.

32. (Previously Presented) An apparatus as in claim 31 wherein said payment information comprises credit card information.

33. (Original) An apparatus as in claim 31 wherein said payment information comprises debit card information.

34. (Original) An apparatus as in claim 31 wherein said payment information comprises prepaid account information.

35. (Original) An apparatus as in claim 31 wherein said payment information comprises information for billing a pre-existing customer account.

36. (Original) An apparatus as in claim 35 wherein said customer account is a wireless service account.

37. (Original) An apparatus as in claim 31 wherein said payment information includes information authorizing a charge to a customer account and a customer verification code for verification of the authorization.

38. (Original) An apparatus as in claim 31 wherein said payment information comprises a customer network account.

39. (Original) An apparatus as in claim 31 wherein said payment information comprises a customer telephone account.

40. (Cancelled)

41. (Original) An apparatus as in claim 1 wherein said control circuit determines from customer transmissions an identity of said customer.

42. (Original) An apparatus as in claim 1 wherein said control circuit causes said transceiver to transmit order status information to a customer.

43. (Original) An apparatus as in claim 24 wherein said agent station displays a plurality of received and pending customer orders.

44. (Original) An apparatus as in claim 43 wherein said agent station includes an entry device for selecting a displayed customer order for action.

45. (Original) An apparatus as in claim 44 wherein said action includes the transmission of a message from said agent through said transceiver to a customer.

46. (Original) An apparatus as in claim 1 wherein said control circuit operates said transceiver to send an audio message to a customer.

47. (Original) An apparatus as in claim 1 wherein said control circuit operates said transceiver to send a display message to a customer.

48. (Previously Presented) An apparatus as in claim 1 wherein said control circuit receives a customer identification transmission from said transceiver, and operates said transceiver to transmit a customer favorites list to said customer.

49. (Original) An apparatus as in claim 1 wherein the control circuit receives a customer identification transmission from said transceiver and provides said customer identification information to a customer priority database.

50. (Original) An apparatus as in claim 1 wherein the control circuit receives a customer identification transmission from said transceiver and provides said customer identification information to a customer loyalty database.

51. (Original) An apparatus as in claim 1 wherein said control circuit is operative to establish a secure financial transaction link for processing a received customer transaction amount authorization.

52. (Original) An apparatus as in claim 1 wherein said order is an order for goods.

53. (Original) An apparatus as in claim 1 wherein said order is an order for services.

54. (Original) An apparatus as in claim 1 wherein said control circuit is a distributed processing control circuit which comprises at least two processing units, each processing an aspect of said order.

55. (Previously Presented) An apparatus as in claim 1 wherein said control circuit is operative to cause the transmission of directions to a fulfillment station, to complete a processed order, to a customer.

56. (Previously Presented) An apparatus as in claim 55 wherein said control circuit causes said transmission of directions in response to a request for directions received from a customer.

57. (Original) An apparatus as in claim 1 wherein said transceiver includes a plurality of communications channels which enable said transceiver and control circuit to simultaneously communicate with a plurality of customers.

58. (Original) An apparatus as in claim 57 further comprising a display device, said control circuit operating said display device to simultaneously display a plurality of pending customer orders.

59. (Original) An apparatus as in claim 58 wherein said control circuit arranges said plurality of pending customer orders in a queue and displays said queued orders on said displayed device.

60. (Original) An apparatus as in claim 57 further comprising a display device, said control circuit causing said display device to simultaneously display the locations of customers communicating with said apparatus.

61. (Previously Presented) An apparatus as in claim 1 further comprising a fulfillment station where a customer completes a processed order, wherein said fulfillment station is a drive-through window.

62. (Previously Presented) A personal wireless communications apparatus for wirelessly placing a customer order, said communications apparatus comprising:

a display device for displaying order information;

an input device for entering order information;

a wireless transceiver for transmitting and receiving order information when said apparatus is within a predetermined range of a vendor facility broadcasting a wireless signal; and

a control circuit for operating said transceiver to establish a wireless communications link with a vendor within said range and for exchanging order information with said vendor, said control circuit operating said display device to display customer order information.

63. (Original) An apparatus as in claim 62 wherein said control circuit stores information regarding available vendors in defined areas, said control circuit being responsive to an input indicating a location of said apparatus to display on said display device those vendors which are in an area where said apparatus is located.

64. (Original) An apparatus as in claim 63 further comprising a positioning indication system for providing location information of said apparatus to said control unit.

65. (Original) An apparatus as in claim 62 wherein said control circuit is responsive to an input at said input device to display on said display device a list of types of services for a customer to choose from.

66. (Original) An apparatus as in claim 62 wherein said control circuit is responsive to an input at said input device to display on said display device a list of types of products for a customer to choose from.

67. (Original) An apparatus as in claim 65 wherein said control circuit is responsive to a user selection at said input device of a type of service to further display on said display device those vendors which are proximate to said apparatus which provide said selected services.

68. (Original) An apparatus as in claim 66 wherein said control circuit is responsive to a user selection at said input device of a type of product to further display on said display device those vendors which are proximate to said apparatus which provide said selected products.

69. (Original) An apparatus as in claim 67 wherein said control circuit is responsive to a user selection of a vendor which provides said selected service to operate said transceiver to initiate a wireless communication with said selected vendor.

70. (Original) An apparatus as in claim 64 wherein said control unit causes said location information to be transmitted to said vendor.

71. (Original) An apparatus as in claim 70 wherein said control circuit receives and processes directions to said vendor.

72. (Original) An apparatus as in claim 70 wherein said control circuit is responsive to a user selection of a vendor which provides said selected product to operate said transceiver to initiate a wireless communication with said selected vendor.

73. (Original) An apparatus as in claim 62 wherein said control circuit operates said transceiver to send customer identification information to said vendor as part of said order information.

74. (Original) An apparatus as in claim 62 wherein said control circuit operates said transceiver to send payment information to said vendor as part of said order information.

75. (Original) An apparatus as in claim 62 wherein said control circuit operates said transceiver to send order selections to said vendor as part of said order information.

76. (Original) An apparatus as in claim 62 wherein said control circuit operates said display device to display a menu of available items received from a vendor.

77. (Original) An apparatus as in claim 62 wherein said control circuit operates said display device to display an amount due for an order, which is received from a vendor.

78. (Original) An apparatus as in claim 61 wherein said control circuit is operative to send a request for directions to said vendor facility.

79. (Original) An apparatus as in claim 78 wherein said control circuit is operative to indicate to a customer received directions to said vendor facility.

80. (Previously Presented) A wireless apparatus at a vendor facility comprising:
a communication transceiver for broadcasting a wireless signal to establish a wireless communications link with potential customers within a predetermined distance of said vendor facility who also have wireless communications devices;

a control circuit coupled to said transceiver for causing said transceiver to attempt to establish the wireless communications link with said potential customers and if a communications link is established for transmitting an order solicitation message to a potential customer over said established link.

81. (Original) A wireless apparatus as in claim 80 wherein said control circuit is located at a vendor facility containing said transceiver.

82. (Original) A wireless apparatus as in claim 80 wherein said control circuit is located at a vendor facility remote from a location of said transceiver.

83. (Original) A wireless apparatus as in claim 82 wherein said control circuit is connected to said transceiver through a network.

84. (Previously Presented) A method for processing customer orders at a vendor transaction facility comprising:

broadcasting a wireless signal to establish a wireless communication link with a mobile customer within a predetermined distance of a vendor transaction facility;

establishing the wireless communication link at said vendor transaction facility with the mobile customer when the mobile customer is within the predetermined range;

receiving a wireless order from said customer.

85. (Previously Presented) A method as in claim 84 further comprising receiving and processing to fulfillment at a customer accessed vendor fulfillment station a plurality of orders from a plurality of mobile customers and displaying at said vendor facility the locations of said plurality of customers.

86. (Original) A method as in claim 85 further comprising arranging the orders from said plurality of customers in a displayable queue at said vendor facility.

87. (Original) A method as in claim 86 wherein said queue is a first-in first-out queue.

88. (Original) A method as in claim 86 wherein said queue is based on customer distance from said fulfillment station.

89. (Original) A method as in claim 86 wherein said queue is based on time to order fulfillment.

90. (Original) A method as in claim 86 wherein said queue is based on an assigned customer priority.

91. (Original) A method as in claim 84 further comprising transmitting menu items to said mobile customer.

92. (Previously Presented) A method as in claim 84 further comprising transmitting promotional specials to said mobile customer.

93. (Original) A method as in claim 84 further comprising monitoring the status of a customer order at an agent station.

94. (Original) A method as in claim 93 further comprising adjusting an entered order at said agent station.

95. (Cancelled)

96. (Previously Presented) A method as in claim 84 further comprising transmitting directions to a fulfillment station to said mobile customer.

97. (Previously Presented) A method as in claim 96 wherein said directions are transmitted in response to a receipt of a request for directions from the mobile customer.

98. (Previously Presented) A method as in claim 84 further comprising examining a profile for said mobile customer and using information in said profile during processing of said order.

99. (Original) A method as in claim 98 wherein said customer profile contains a list of said mobile customer's favorite items for ordering, said method further comprising sending said favorites list to said mobile customer.

100. (Original) A method as in claim 84 further comprising receiving and storing information about said customer in a customer data base.

101. (Previously Presented) A method as in claim 85 wherein said fulfillment station is a drive-through window.

102. (Previously Presented) A method of operating a wireless customer communications device comprising:

broadcasting a wireless signal to establish a wireless communication link with a wireless customer communications device within a predetermined distance of a vendor transaction facility;

establishing the wireless communications link with the vendor transaction facility when said wireless customer communications device is within the predetermined range of said facility; and

exchanging order information with said vendor transaction facility for fulfillment at a vendor fulfillment station which is accessible by said customer.

103. (Previously Presented) A method as in claim 102 further comprising:
determining the location of said wireless communications device;
determining from said location those vendors which are within the predetermined range of said location; and

establishing said wireless communications link with one of said vendors.

104. (Previously Presented) A method as in claim 102 further comprising:
displaying a list of available vendors at said wireless communications device; and
establishing said wireless communications link with one of said vendors.

105. (Original) A method as in claim 102 further comprising transmitting the location of said wireless customer communications device to said vendor facility.

106. (Original) A method as in claim 105 further comprising displaying at said wireless customer communications device directions to said vendor facility.

107. (Original) A method as in claim 102 wherein said vendor facility includes a drive-through fulfillment station.

108. (Original) A method as in claim 102 further comprising displaying a menu of items available at said vendor facility at said wireless customer communications device.

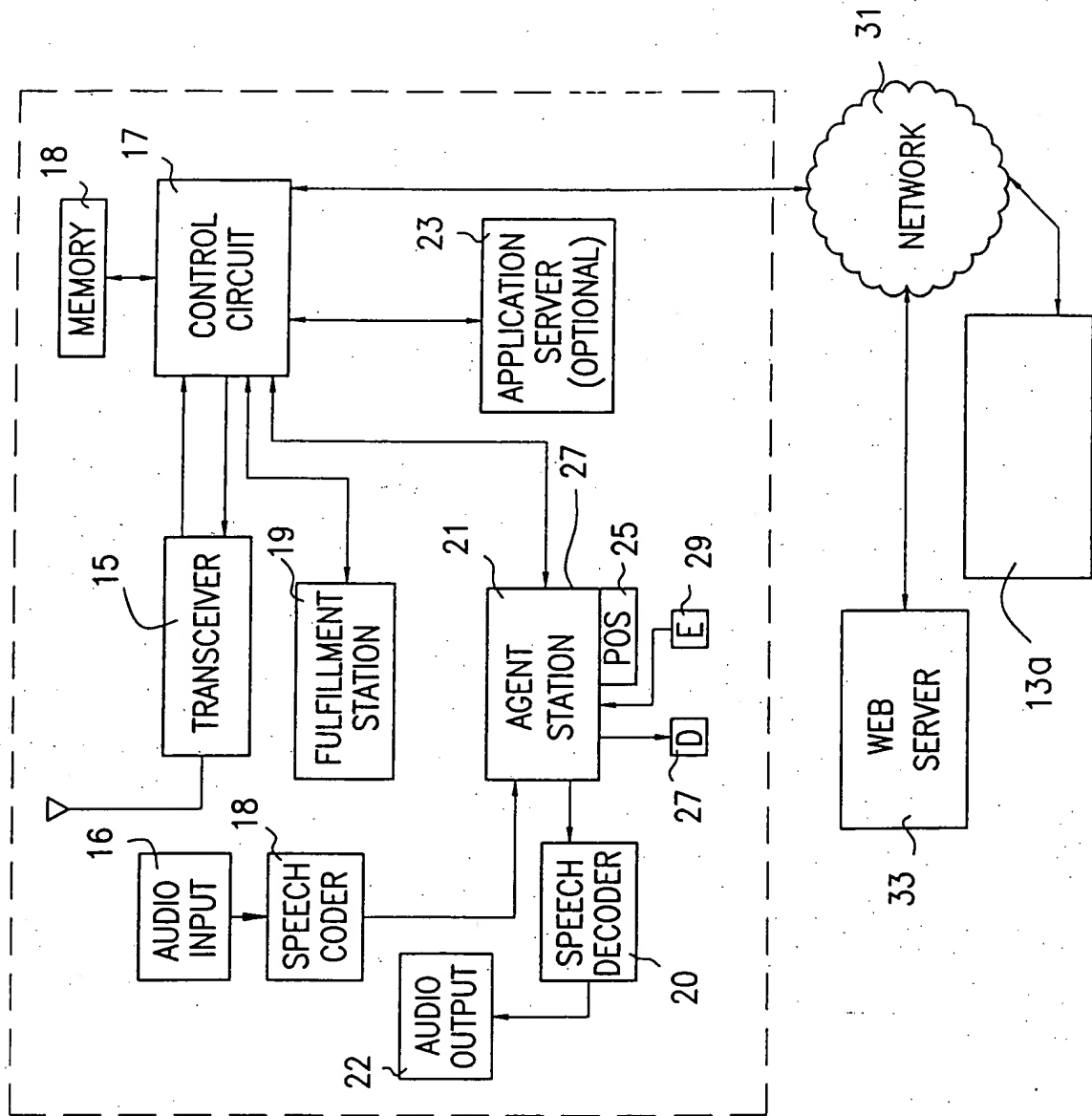


FIG. 1

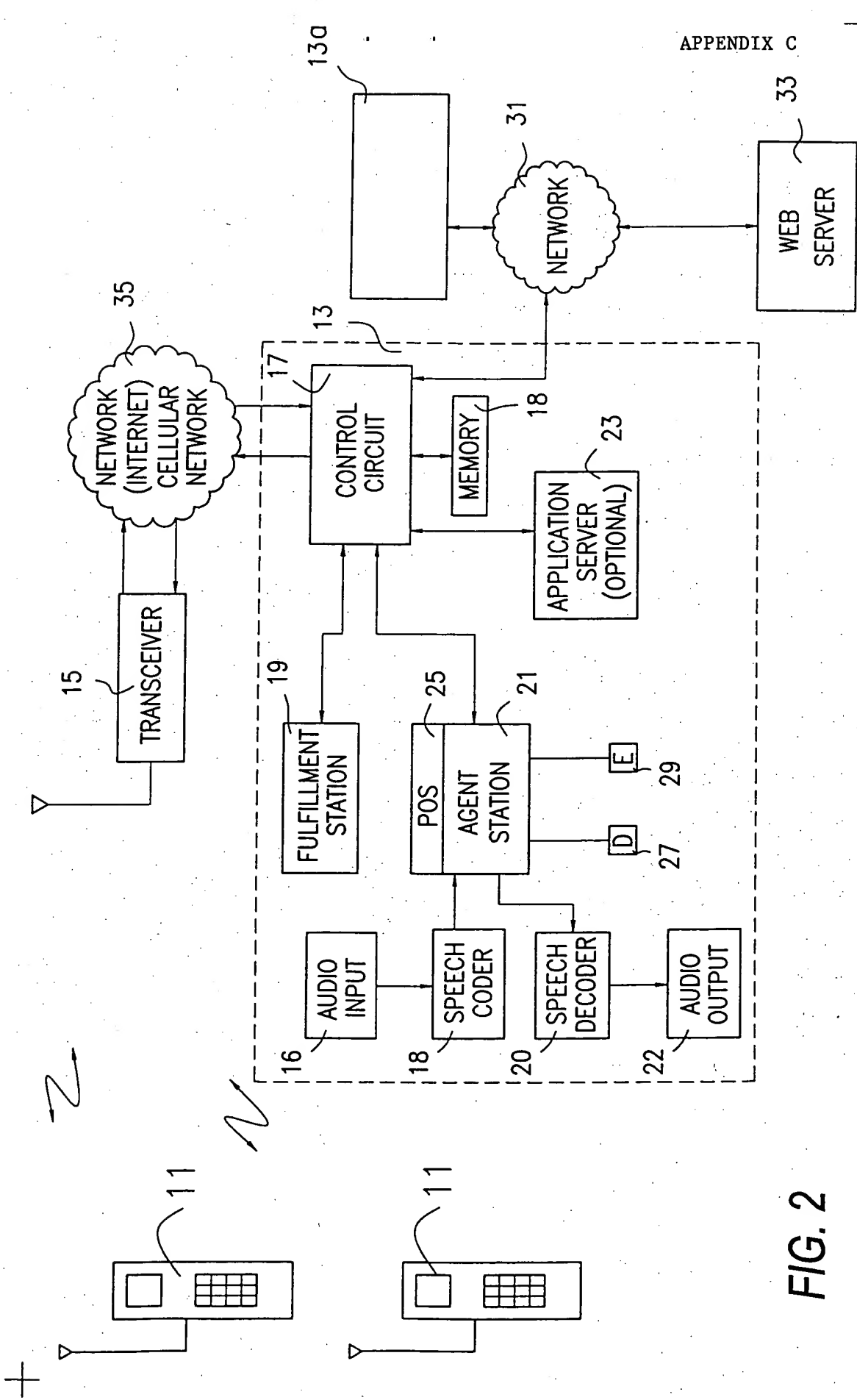


FIG. 2

FIG. 5

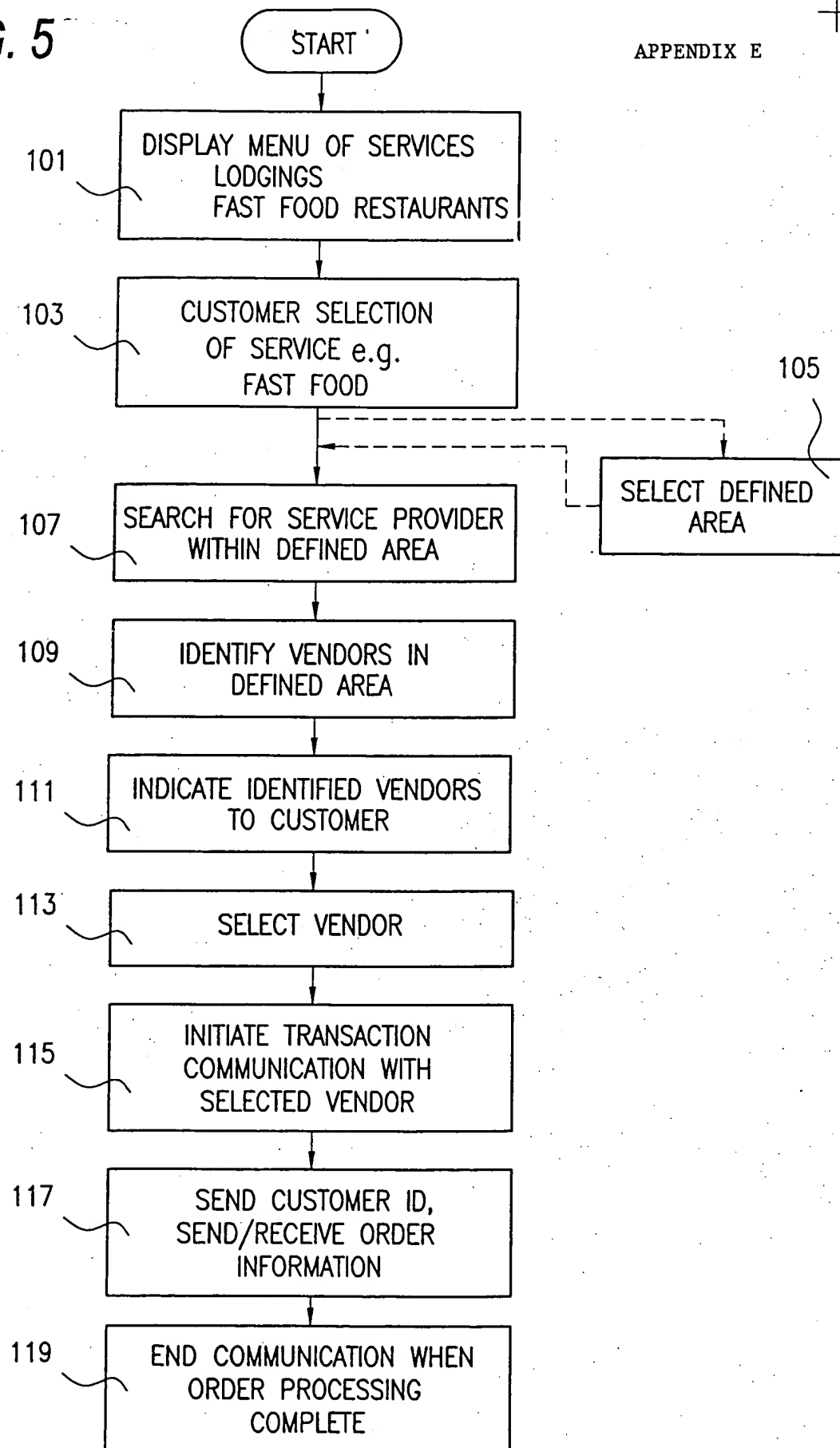


FIG. 3

APPENDIX D

AVE A	AVE B	AVE C	AVE D	1ST ST
X ₁				2ND ST
		41		3RD ST
				4TH ST
X ₃		X ₂		5TH ST
	45			
	43			

27

FIG. 4

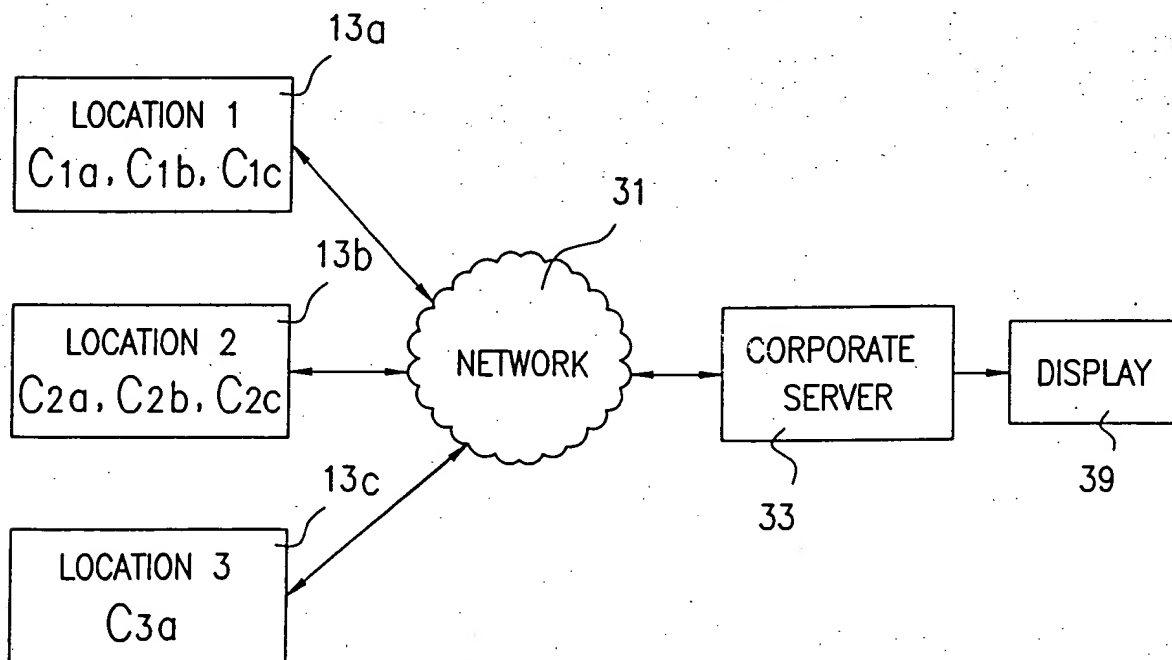


FIG. 6

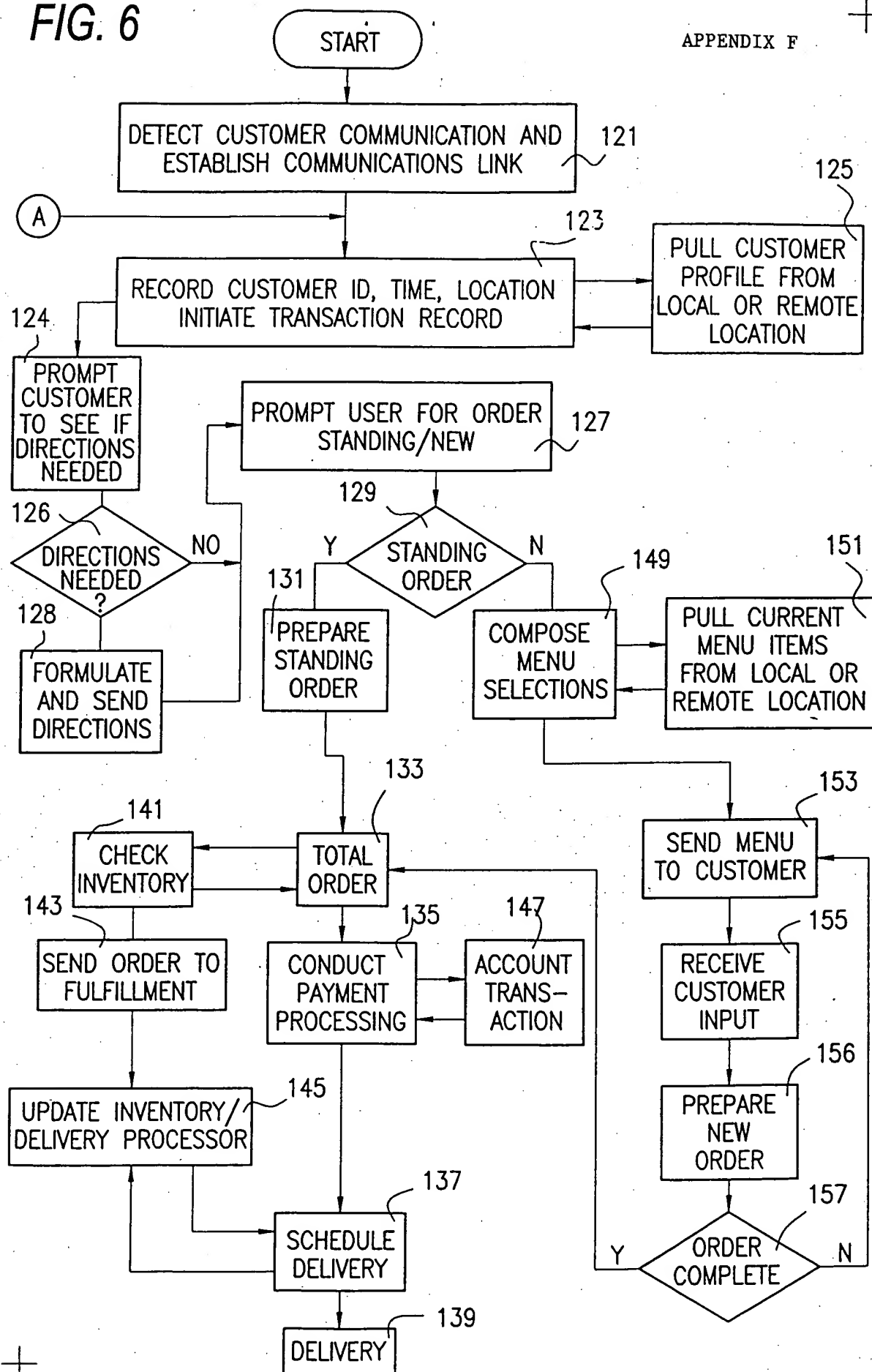


FIG. 7

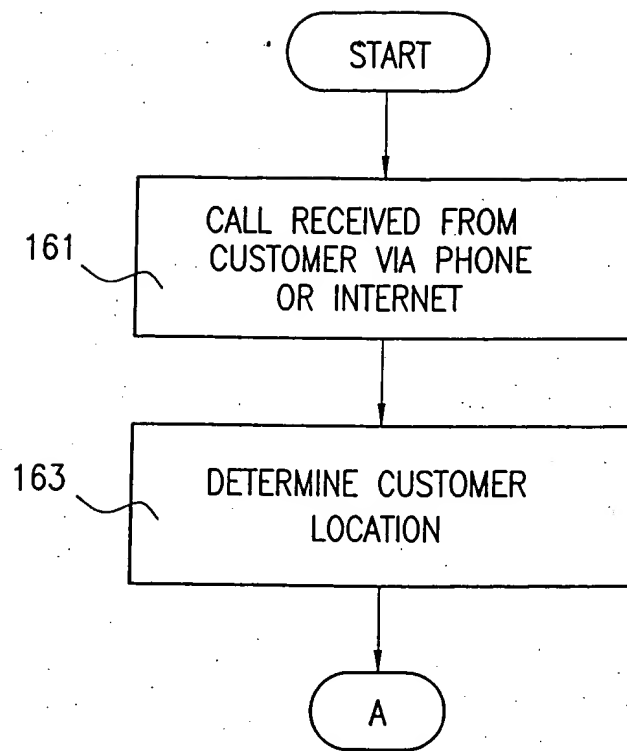


FIG. 8

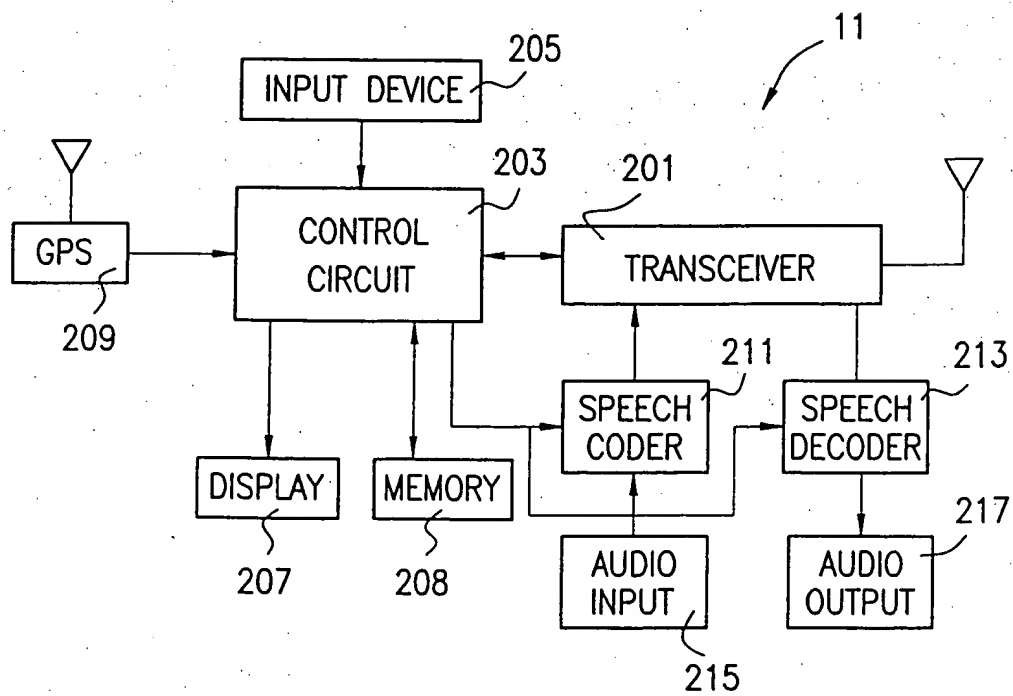
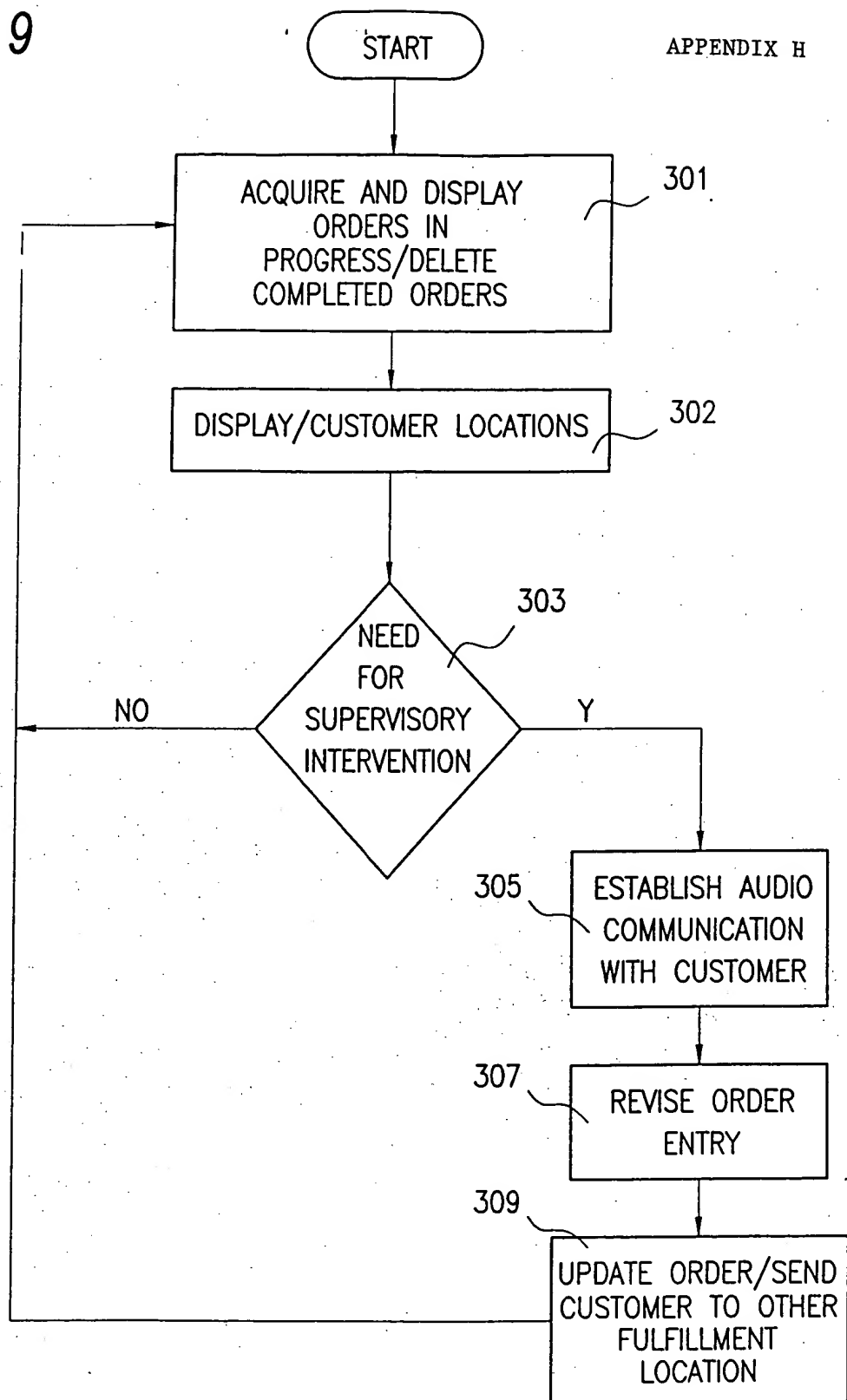


FIG. 9



CUSTOMER QUEUE

ARRIVAL TIME	TIME ORDER PRIORITY	M COMMERCE	ORDER	AVAILABLE	COMPLETE	TRANS #	DISTANCE/LOCATOR	TIME TO ARRIVAL	PREDICTED FULFILLMENT ORDER
1ST	5 MIN	COMPLETE	5 ITEMS (DISPLAY)	YES	YES	5	.2 MI	2 MIN	2
2ND	4 MIN	IN PROGRESS	15	NO	NO	6	.3 MI	3 MIN	4
3RD	3 MIN	COMPLETE	10	YES	NO	7	.1 MI	1 MIN	3
4TH	2 MIN	COMPLETE	1	YES	YES	8	0	0	1

FIG. 10